8500046

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHAME, COME:

The Standard Oil Co.

Telhereas, there has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COLY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF Lighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEET AND PERIODIC REFLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT TY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'SX-5-13-3'

In Testimony Witherest, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 31st day of March in the year of our Lord one thousand nine hundred and eighty-six.

George of Agriculture

Steel

Kenneth II, Evo Commissioner

Commissioner Plant Variety Drotection Offic

Agricultural Marketing Service

					APPROVAL EXPIRES 4-30-85		
U.S. DEPARTMENT OF AGRICULTURE				FORM APPROVED: OMB NO. 0581-0055			
AGRICULTURAL MARKETING SERVICE					eation is required in order to determine ant variety protection certificate is to		
APPLICATION FOR	PLANT VARIETY PROT	FC:	TION CERTIFICATE	be iss	ued (7 Ú.S.C. 2421). Information is		
	(Instructions on reverse)		TON CENTILICATE		confidential until certificate is issued S.C. 2426).		
1. NAME OF APPLICANT(S)		7	2. TEMPORARY DESIGNATION	3. V	ARIETY NAME R.15		
The Standard O	The Standard Oil Company X-5-13-3				SX-5-13-3 1/29/8		
4. ADDRESS (Street and No. or R			5. PHONE (Include area code)		FOR OFFICIAL USE ONLY		
Midland Buildi Cleveland, Ohi		Ì	(216) 575-8475	PVPC	NUMBER OF OOD AC		
·	0 441.1.3				8500046		
6. GENUS AND SPECIES NAME Zea Mays 7. FAMILY NAME (Botanical) Gramineae			ď	DATE 7 OIL 95			
			ae	FILING	1-24-85		
			Ξ	4:00 A.M. XXP.M.			
O' KIND WAND				<u> </u>	AMOUNT FOR FILING		
8. KIND NAME		9. C	DATE OF DETERMINATION	_	7 000		
Corn		Dec	cember 1981) ED	\$		
COLII	·	Det	Cember 1901				
10. IF THE APPLICANT NAMED	IS NOT A "PERSON " GIVE FOR	284 0	F ORGANIZATION (Corporation.	RECEIVED	1-24-85 AMOUNT FOR CERTIFICATE		
partnership, association, etc.)	BROTTA TENSON, GIVE FOR	i IAI O	or Organization (corporation,	S	k		
Corporation				FEES	DATE		
Corporación							
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Ohio				January 10, 1870			
	DE LOANT DEDOCOCATATIVE (A)	\ . 					
Charles E. Lin	sey or Geoffrey I),1∓ Mi	ANY, TO SERVE IN THIS APPLIC	ATIO	N AND RECEIVE ALL PAPERS		
-	erson, Farabow, (
1775 K Street,		Jaı	riect & Dunner				
Washington, D.			PHONE (Include are	a code	(202) 293-6850		
14. CHECK APPROPRIATE BOX					(202) 293-8830		
_			lection 52 of the Plant Variety Pro	tection	a Act)		
b. Exhibit B, Novelty Star	•	,		,	· 		
		fa	rom Plant Variety Protection Offic	<i>a</i> 1	•		
d, Exhibit D, Additional I		ım jı	om Funt variety Protection Office	·)	e.		
	• /	hin					
	f the Basis of Applicant's Owners		TY BE SOLD BY VARIETY NAME	ONL	Y AS A CLASS OF CERTIFIED		
SEED? (See Section 83(a) of ti	he Plant Variety Protection Act.)		Yes (If "Yes," answer i				
 DOES THE APPLICANT(S) SP LIMITED AS TO NUMBER OF 	ECIFY THAT THIS VARIETY BE GENERATIONS?	Ē	17. IF "YES" TO ITEM 16, W BEYOND BREEDER SEE	HICH D?	CLASSES OF PRODUCTION		
Yes	No		Foundation		egistered Certified		
18. DID THE APPLICANT(S) PR	EVIOUSLY FILE FOR PROTEC	CTIO	N OF THE VARIETY IN THE U.	S.?	Yes (If "Yes," give date)		
					ر السا		
			·		X No		
19. HAS THE VARIETY BEEN R	LEASED, OFFERED FOR SAL	E, C	OR MARKETED IN THE U.S. OR	ОТНЕ	R COUNTRIES ?		
•					Yes (If "Yes," give name of countries and dates)		
·					X No		
20. The applicant(s) declare(s)	hat a viable comple of hadis on	eds.	of this variety will be furnished	with			
plenished upon request in ac	cordance with such regulation	is as	may be applicable.	AN I CIL	ene application and will be re-		
The undersigned applicant(s distinct, uniform, and stable Variety Protection Act.) is (are) the owner(s) of this s as required in Section 41, and	exu is e	ally reproduced novel plant var entitled to protection under the	iety, a prov	and believe(s) that the variety is is issions of Section 42 of the Plant		
Applicant(s) is (are) informe	ed that false representation her	rein	can jeopardize protection and t	esult	in penalties.		
SIGNATURE OF APPLICANT	The Standard 9il	L C	Company	P	ATE //A		
	By WE		m	_	1/16/05		
KANATURA SA ARKANAK	Larry W.	Εv	7ans	χQ	*XEx		
	<u></u>	ate	ent & License Div	.			
	, ,		•	- 1			

المراحة المرا

15X-5-13-3'

<X-5-13-37originated out of Dudley and Alexander's "Synthetic OP." The breeding method for obtaining Synthetic OP is described in J. W. Dudley and D. E. Alexander, Crop Science, 9:613-615, 1969. Original breeding stock was obtained from the University of Illinois in May, 1980.</p>

The seeds of Synthetic OP were planted in May of 1980 and self-pollinations were made on the most robust plants during the summer of 1980. Self-pollinated seed from these plants were bulked and selfed in the winter of 1980-81, winter of 1981-82, winter of 1982-83, and summer of 1983. Ears were kept separate from the summer 1983 planting, and an ear-to-row planting was made during the winter of 1983-84. The resulting plants were self-pollinated in the summer of 1984.

One generation was judged for uniformity and stability. Acceptable uniformity and stability were observed. There were no discernible variants. $I_{5\times-5-13-3}I_$

Outline of the Development of 4x-5-13-37

Туре	Description	Location	<u>Year</u>
Synthetic OP	Self-pollination	Ohio, Illinois	1980
5	Self-pollination	Florida	1980-81
5	Self-pollination	Florida	1981-82
5	Self-pollination	Florida	1982-83
5	Self-pollination	Indiana	1983
5	Self-pollination	Florida	1983-84
<x-5-13-37 '5χ-5-13-3'</x-5-13-37 	Self-pollination	Ohio	1984

Exhibit B: Novelty Statement

Afs 1/29/86

'SX-5-13-3'is a tetraploid Zea maize ssp. maize. Unlike diploid corn,'SX-5-13-3'has twice the normal number of chromosomes, that is, it has 40 somatic chromosomes. Normal Zea maize ssp. maize is diploid, and has 20 somatic chromosomes. Therefore,'SX-5-13-3'is unique on the basis of its number of somatic chromosomes, and differs from all diploid corn on this basis.

'SX-5-13-3' differs from Synthetic OP, from which it was derived, on the basis of its uniformity and homozygosity. Synthetic OP is a very heterogeneous population, as demonstrated by the fact that the Applicant has derived a number of novel varieties from Synthetic OP.

The most similar varieties to \$\(\sigma \text{X} - 5 - 13 - 3 \) are other varieties derived from Synthetic OP. These are \$\(\sigma \text{X} - 5 - 6 \), \$\(\sigma \text{X} - 5 - 11 \), \$\(\sigma \text{X} - 5 - 14 - 1 - 2 \), and \$\(\sigma \text{X} - 5 - 18 \), for which applications for plant variety protection have been filed. The varieties have been assigned the following application numbers:

Variety	Application Number
'Sx-5-6'	8400114
'Sx-5-11'	8400110
(SX-5-9-1-2)	
'Sx-5-14-1-2'	
'sx-5-18'	
'SX-5-13-3 differs from:	
SX-5-6 on the basis of: LEAF Color Glume color Ring color	(2 V3. 3) (1 vs. 2, respectively)* (1 vs. 2)
$^{l}SX-5-11'$ on the basis of:	
Glume color Ring color Leaf width-Florida Height-Ohio Ear height-Ohio	(1 vs. 2) (1 vs. 2) (13 cm vs. 9 cm) (253 cm vs. 218 cm) (135 cm vs. 98 cm)

^{*} The numbers refer to those listed for the particular characteristics on the Objective Description of Variety (Exhibit C) in the application for the identified varieties.

(SX-5-9-1-2) on the basis of:

Anther color
Glume color
Ring color
Leaf width
Longitudinal creases
Ear height-Ohio

'SX-5-14-1-2' on the basis of:

PLANT HELENT COHIO)

Tassel branch number

 $^{l}SX-5-18$ on the basis of:

Anther color
Glume color
Silk color
Tassel branch number
Esterase 1**

(1 vs. 2) (1 vs. 2) (1 vs. 2) (13 cm vs. 8 cm) (2 vs. 1) (135 cm vs. 105 cm)

(253 cm V5, 270cm) (20 vs. 12)

(1 vs. 2) (1 vs. 2) (1 vs. 2) (20 vs. 13) (1 vs. Fixed 1,3)

^{**} See Exhibit D in the referenced application.

'SX-5-13-3' R/5
1/29/86

Amendment to Exhibit B for Corn Variety < X-5-13-37 (Application No. 8500046)

'SX-5-13-3'

Please amend Exhibit B to show that $\langle X-5-13-3 \rangle$ differs from SX-5-6 on the basis of leaf color (2 vs 3) and differs from SX-5-14-1-2 on the basis of plant height (Ohio) (253 cm vs 270 cm).

FORM GR-470-28 (2-15-74)

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL MARKETING SERVICE GRAIN DIVISION HYATTSVILLE, MARYLAND 20782

Revised X-5-13-3

EXHIBIT C (Corn)

OBJECTIVE DESCRIPTION OF VARIETY

CORN (ZEA MAYS)			
The Standard Oil Company	FOR OFFICIAL USE ONLY		
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	9500046		
Midland Building (928 TT)	VARIETY NAME OR TEMPORARY		
Cleveland, Ohio 44115	DESIGNATION 5X-5-13-3		
	经 到基本		
Place the appropriate number that describes the varietal character of this variety in the Place a zero in first box (e.s. 0 8 9 or 0 9) when number is either 99 or less or	boxes below. 9 or less.		
1. TYPE:	View of the second seco		
2 1 = SWEET 2 = DENT 3 = FLINT 4 = FLOUR 5 = PO	OP 6 = ORNAMENTAL		
2. REGION WHERE BEST ADAPTED IN THE U.S.A.:			
7 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 5 = SOUTHCENTRAL 6 = SOUTHWEST 7 = MOST REGIONS	4 = SOUTHEAST		
3. MATURITY (In Region of Best Adaptability): (Under "	omments" (pg. 3) state how		
I I I	s were calculated)		
DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK	HEAT UNITS		
DAYS FROM 50% SILK TO OPTIMUM EDIBLE QUALITY	HEAT UNITS		
DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE	HEAT UNITS		
4. PLANT: 2 5 3 Ohio 1	3 5 Ohio		
	6 0 CM, EAR HEIGHT (To base of top ear)		
Florida	Florida		
CM. LENGTH OF TOP EAR INTERNODE	· · · · · · · · · · · · · · · · · · ·		
Number of Tillers: Number of Ears Per Stalk:			
realise of Easter State.			
	SLIGHT TWO-EAR TENDENCY		
Cytoplasm Type:	EAR TENDENCY 4 = THREE-EAR TENDENCY		
Суторівані і уре.			
1 = NORMAL 2 = "T" 3 = "S" 4 = "C" 5 = OTHER	(Specify)		
5. LEAF (Field Corn Inbred Examples Given):			
Color:	•		
1 = LIGHT GREEN (HY) 2 = MEDIUM GREEN (WF9) 3 = DARK GRE	EN (B14) 4 = VERY DARK GREEN (K166)		
Angle from Stalk (Upper half): Sheath Pubscence:			
$\begin{bmatrix} 2 \end{bmatrix}$ 1 = $\langle 30^{\circ}$ 2 = $30-60^{\circ}$ 3 = $\rangle 60^{\circ}$ $\begin{bmatrix} 1 \end{bmatrix}$ 1 = LIGHT (1)			
Marginal Waves: Longitudinal Creases:			
2 1 = MONE (HY) 2 = FEW (WF9) 3 = MANY (OH7L) 2 1 = ABSENT	(OH51) 2 = FEW (OH56A)		
3 = MANY (F	'A11)		
Width: Length:	·		
1 3 at west pour of the Florida (0.770)	D. MODE AFAS		
	R NODE LEAF		
NUMBER OF LEAVES PER MATURE PLANT	Prida Prida		
I I MONIBER OF LEWASS FER MINI ONE FEMALE	,		

<u>-</u>							
	Pericarp Color:	1 = COLORLESS			3 = TAN	4 = BRONZE	
		5 = BROWN 8 = VARIEGATE	6 = LIGI	11 KED	7 = CHERRY RED		
		0 - VANIEGATE	D (Describe)				
1	Aleurone Color:	1 = HOMOZYGOU	JS 2 = S	EGREGATING (Describe)_			 .
	1 = WHITE	2 = PINK	3 = TAN	4 = 8ROWN	5	= BRONZE	6 = RED
,—	7 = PURPLE	8 = PALE PUR	PLE 9 = V	ARIEGATED (Describe)			
3	Endosperm Color:	1 = WHITE	2 = PALE YELLO	W 3=YELLOW	4 ≃ PINK-ORAN	3E 5= WHI	TE CAP.
Endospern	п Туре:						
	1 = SWEET (su1)	2 = EX1	TRA SWEET (sh2)	3 = NORMAL STAI	RCH 4 = HIC	SH AMYLOSE ST	ARCH
3	5 = WAXÝ STARCI		*	7 = HIGH LYSINE		HER (Specify)	
	GM. WEIGHT /100						
9. COB:				 	<u> </u>	56	
	MM. DIAMETER A	T MID-POINT	•				
Strength:				Color:			
	1 = WEAK	2 = STRONG	·	1 = WHITE 2 = 5 = VARIEGATED	PINK 3 = RED 6 OTHE	4 = BROWN	
10. DISEASE	RESISTANCE (O =	Not Tested, 1 = Su	sceptible, 2 = Resista	nt):			
0	STALK ROT (Diplo	dia)	0 STALK ROT	「(Fusarium)	0 STAI	_K ROT (Gibberel	la)
0							
	NORTHERN LEAF BLIGHT U SWOT						
؛ ال	0 CORN SMUT 0 BACTERIAL WILT						
	BACTERIAL LEAF	BLIGHT	MAIZE DWA	ARF MOSAIC	0 STU	NΤ	
<u> </u>	OTHER (Specify)		LJ				
11. INSECT R	ESISTANCT (O = N	ot Tested. 1 = Susc	eptible, 2 = Resistant);			
	·						
0 0	CORNBORER	0 EA	ARWORM	0 SAPB	EET <u>L</u> E	0 АРНІ) i
0 1	ROOTWORM (North	ern) RO	OOTWORM (Western)			
		- 0 -1	•				
0 '	ROOTWORM (South	lern) U	THER (Specify)				
		RESEMBLING TH		R THE CHARACTERS GIV	VEN:		
CHARACT	ER		VARIETY	CHARACTER		VARIETY	
Maturity				Kernel Type			
Plant Type				Quality (Edible)		·
Ear Type				Usage			
REFEREN	CES:						
	.S. Department Agri			•			
			_	mpany, Westport, Connecti	-		
				Linkage Studies in Meize.Co	ornell A.E.S., Mem.	180, 1935.	
				ca. Madison, Wisconsin.	•		
			hio, Ohio A.E.S. Bu	il. 831. 1959. Inbred Lines — PhD. Thesis	Ohio State Universi	eitv	
			assarreactor or com	Thorse Lines - File. Thesis	, Onto Grate Oniver		

'5X-5-13-3' A/S
Exhibit D: Additional Description of Corn Variety<X-5-13-37
/29/86

'5x-5-13-3'

 $\langle X-5-13-37$ was tested for esterase 1 as described in A. L. Kahler, Crop Science, 23:572-576, 1983. The results were as follows: esterase 1 locus, allele 1.

Exhibit E: Statement of the Basis of Applicant's Ownership

The Standard Oil Company is the employer of the plant $\frac{5X-5-13-3}{5X-5-13-3}$ breeder involved in the development of $\frac{5X-5-13-3}{5X-5-13-3}$. The Standard Oil Company has sole rights to and ownership of $\frac{5X-5-13-3}{5X-5-13-3}$.

ASSIGNMENT

WHEREAS, I, STEVEN CHANDLER PRICE, a citizen of the United States of America, residing at 3284 Hyde Park Avenue, Cleveland Heights, Ohio 44118, as assignor, have developed a novel plant variety designated Corn X-5-13-37, and PFS-1/29/86

WHEREAS, THE STANDARD OIL COMPANY, a corporation organized and doing business under the laws of the State of Ohio, whose post office address is Midland Building, Cleveland, Ohio 44115, as assignee, is desirous of securing the entire right, title, and interest in and to this novel plant variety in all countries throughout the world;

NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) in hand paid and other good and valuable consideration the receipt of which from assignee is hereby acknowledged, I, as assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, my entire right, title and interest in and to this novel plant variety designated CornSx-5-13-3 and improvements thereof, the sodesignated Application for United States Certificate of Plant Variety Protection, which was executed on January 16, 1985 assignee, and all Certificates of Plant Variety Protection of the United States which may be granted thereon, and all reissues, continuations, extensions, or renewals thereof, and all rights to claim priority on the basis of such application, and all applications for Certificates of Plant Variety Protection or applications for similar rights, however denominated, which may hereafter be filed for this novel plant variety in any foreign country and all Certificates of Plant Variety Protection or other rights which may be granted on this novel plant variety in any foreign country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Secretary of Agriculture of the United States and any official of any foreign country whose duty it is to issue certificates on applications as described above, to issue all Certificates of Plant Variety Protection or other rights for this novel plant variety to assignee, its successors and assigns in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will, without further consideration, communicate with assignee, its successors and assigns, any facts known to me respecting this novel plant variety, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the

title to this novel plant variety in said assignee, its successors and assigns, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns to obtain and enforce proper certificate protection for this novel plant variety in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

I authorize my attorney(s), <u>Joseph G. Curatolo</u>, to insert on this assignment the date of execution of said application when known.

IN TESTIMONY WHEREOF, I day of 1985,	have hereunto set my hand this 1984. (Signature of Assignor)
COUNTY OF Coyahoga)
STATE OF Ohio) ss.)
Subscribed and Sworn to anuany, 1984. (SEAL)	before me this the day of Motary Public SUSAN MUNDING FROLLO Notary Public STATE OF OHIO My Commission Expires August 24, 1985
Witnesses:	